REMARKS/ARGUMENTS

In response to the Office Action dated October 14, 2005, claims 1-3 and 5 are amended. Claims 1-5 are now active in this application. No new matter has been added.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 102

Claims 1-5 are rejected under 35 U.S.C. § 102(b) as being anticipated by Haraguchi et al. (USPN 6,198,494).

To expedite prosecution, claim 1-3 and 5 are amended to clearly distinguish over Haraguchi et al.

Amended independent claim 1 is directed to performing a print inspection. The apparatus inspects object data, such as rasterized digital data used in print in a printing apparatus. More specifically, an image sharpness conversion element ***weakens*** the respective image sharpnesses of the object data and predetermined reference data, then a comparison element compares pixels in the same pixel position (or pixels in shifted positions only by a known predetermine value) with each other to generate comparison result data which describes a difference between a tone value by pixel, and then a judgment element judges whether the difference (having been obtained as the comparison result data) is significant or not in accordance with a criterion given as a judgment parameter.

In such ways, the apparatus of the present invention weakens the respective image sharpnesses of the object data and reference data by the image sharpness conversion element when performing an inspection. Accordingly, even with data of high resolution, exceeding the image resolution of humans' visual property, as object data, a difference from the reference data can be detected at almost the same detection sensitivity as that from a visual check. Stated

another way, the apparatus surely detects a difference that should be detected by a visual check while excluding unnecessary differences that need not be detected from inspection objects.

Haraguchi et al. disclose an image recording apparatus in which recording (by exposure) is conducted by a plurality of paralleled print heads in each of which a plurality of light emitting elements are linearly aligned in the primary scanning direction, and an object of Haraguchi et al. is to resolve image degradation, namely exposure unevenness during the recording, or more specifically, to eliminate deviations in recording positions of the respective print heads when recording an image on a line-by-line basis (bring the resolutions of print heads for the respective colors into agreement) (see col. 1, lines 6 to 10; col. 2, line 66 to col. 3, line 4, for example).

One embodiment discloses where recording is conducted by a print head for each color using the same chart pattern, then the print width thereof and a pixel position (concentration peak position) are measured, and the presence of recording deviations of each color head is determined based on the result, to thereby correct the positions (see col. 10, line 62 to col. 11, line 14; col. 13, line 50 to col. 15, line 13, for example). In short, in Haraguchi et al, what is compared are the image recording results regarding different colors recorded by the respective print heads. Thus, the comparing process performed is different from a typical print inspection process.

Therefore, the technique disclosed in Haraguchi et al. and the invention recited in amended independent claim 1 are based on completely different concepts from each other. Thus, it is quite natural that Haraguchi et al. fails to disclose or suggest the specific embodiment regarding an inspection process according to the invention recited in amended independent claim 1, namely that the image sharpness conversion element weakens the image sharpnesses of the object data and reference data, then the comparison element obtains a difference between a pixel

value, and the judgment element judges whether the difference is significant or not in accordance with a judgment parameter, thereby checking the object data whose sharpness has not been weakened yet. The inspection process performed by the apparatus of amended independent claim 1 is not performed by the technique disclosed in Haraguchi et al.

A detailed review of Haraguchi et al. evinces that the Examiner has erroneously equated the sharpness conversion section 44 disclosed in Haraguchi et al. with the image sharpness conversion element recited in amended independent claim 1. The sharpness conversion section 44 of Haraguchi et al. is for converting the sharpness of image data used in image recording by exposure when conducting the image recording, and not for converting the sharpnesses of object data for inspection and reference data prior to the inspection.

Furthermore, the Examiner's equating of Item 3 (col. 3, line 51-55) in Haraguchi et al. with the inspection process in the present invention is also erroneous. Haraguchi et al. merely discloses that when correcting deviations of print heads recording images of different colors, the other print heads are corrected with the recording position of a pixel recorded by one print head as a reference, thereby reducing the number of correction processes by one print head than when using another independent reference. Needless to say, this is different from the actions of the comparison element comparing the object data and reference data whose image sharpnesses have been weakened by the image sharpness conversion element, or of the judgment element judging whether the object data is significant or not.

The above argued differences between the apparatus of amended independent claim 1 vis-à-vis the apparatus of Haraguchi et al. undermine the factual determination that identically describes the claimed inventions within the meaning of 35 U.S.C. § 102. ***Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.,*** 976 F.2d 1559, 24

USPQ2d 1321 (Fed. Cir. 1992); ***Kloster Speedsteel AB v. Crucible Inc.,*** 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986). Applicants, therefore, submit that amended independent claim 1 is patentable over Haraguchi et al. Consequently, the allowance of amended independent claim 1 is respectfully solicited.

The inventions recited in the amended independent claims 2, 3 and 5 are based on the same technical concept as the invention recited in the amended independent claim 1, and further limit the invention of claim 1. Accordingly, amended independent claims 2, 3 and 5 are patentable over Haraguchi et al. also, and their allowance is respectfully solicited.

The Examiner has erroneously argued that the embodiment disclosed in Haraguchi et al. where light received by the beam receiving sensor 52 is subject to photoelectric conversion to be output to the CPU 43 corresponds to the image reader recited in dependent claim 4. According to the disclosure of Haraguchi et al., the beam receiving sensor 52 receives light for the so-called shading correction. However, the data itself read by the beam receiving sensor 52 and output to the CPU 43 is not used for correcting the recording position of each print head. In Haraguchi et al., a recording result having a chart pattern recorded by each print head is used in correcting deviations of the print heads. Needless to say, the data received and obtained by the beam receiving sensor 52 is **NOT** used for inspection.

Therefore, dependent claim 4 is patentable over Haraguchi et al. for reasons in addition to the fact that amended independent claim 3, from which claim 4 depends, is patentable over Haraguchi et al. Consequently, the allowance of dependent claim 4 is respectfully solicited also.

CONCLUSION

Accordingly, it is urged that the application, as now amended, is in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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